CONTENT OF THE PRO-INFLAMMATORY CYTOKINE FNO-α IN COMMUNITY-ACCOMBINED PNEUMONIA IN NEWBORN AND YOUNG CHILDREN

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Relevance

Community-acquired pneumonia in the structure of childhood morbidity and mortality occupies one of the leading positions, especially among newborns and young children.

Purpose of the study. To analyze the content of the pro-inflammatory cytokine FNO-α in newborns and young children with community-acquired pneumonia, depending on the severity of the disease.

Material and methods. A total of 170 children were examined, 120 of them with community-acquired pneumonia: 52 newborns and 68 young children. The control group consisted of 50 healthy children. Immunological studies in the examined children were carried out in the laboratory of immunoregulation of the Institute of Immunology and Human Genomics of the Academy of Sciences of the Republic of Uzbekistan. The content of FNO-α in the blood serum was determined by enzyme-linked immunosorbent assay (test system JSC "VECTOR-BEST" - Russia, Novosibirsk). Statistical processing of the material was carried out using the computer program Statistica 6.0. The significance of differences in the studied parameters was assessed by Student's t-test (t).

Results. It was found that in newborns with community-acquired pneumonia, the level of FNO-α production was significantly increased in both moderate and severe cases relative to the control. At the same time, its greatest increase was noted in newborns with severe community-acquired pneumonia. Thus, the content of FNO-α in newborns with a moderate course was 42.5±1.1 pg/ml, which was 2.3 times higher ($P<0.001$) than in the control group - 18.7±1.3 pg /ml, and in newborns with severe course, the content of this cytokine was increased by 2.9 times ($P<0.001$) relative to the control and amounted to 53.6±2.4 pg/ml. In young children, the content of FNO-α also in moderate pneumonia was increased by 2 times

relative to the control, respectively 43.7±2.5 pg/ml and 21.3±1.1 pg/ml. In young children with severe course of community-acquired pneumonia, the level of FNO-α exceeded the control values by 3.2 times (P<0.001) and amounted to 69.1 ± 3.4 pg/ml, and it was also slightly higher than in newborns with severe course of the disease.

Conclusions

Thus, the data obtained show that in newborns and young children with community-acquired pneumonia, with an increase in severity, the production of the pro-inflammatory cytokine FNO-α increases.